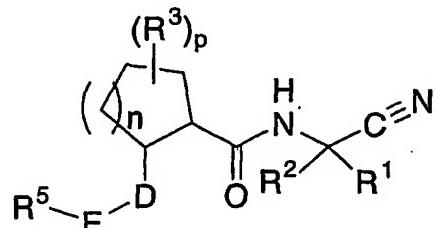


WHAT IS CLAIMED IS:

1. A compound of the following formula:



5

wherein

R¹ is hydrogen, C₁₋₆ alkyl or C₂₋₆ alkenyl wherein said alkyl and alkenyl groups are optionally substituted with C₃₋₆ cycloalkyl, -SR⁶, -SR⁷, -SOR⁶, -SOR⁷, -SO₂R⁶,

- 10 -SO₂R⁷, -SO₂CH(R⁷)(R⁹), -OR⁷, -OR⁶, -N(R⁷)₂, one to six halo, aryl, heteroaryl or heterocycyl wherein said aryl, heteroaryl and heterocycyl groups are optionally substituted with one or two substituents independently selected from the group consisting of C₁-6 alkyl, halo, hydroxyalkyl, hydroxy, alkoxy and keto;

15 R² is hydrogen, C₁-6 alkyl or C₂-6 alkenyl wherein said alkyl and alkenyl groups are optionally substituted with C₃-6 cycloalkyl, -SR⁶, -SR⁷, -SOR⁶, -SOR⁷, -SO₂R⁶, -SO₂R⁷, -SO₂CH(R⁷)(R⁹), -OR⁷, -OR⁶, -N(R⁷)₂, one to six halo, aryl, heteroaryl or heterocycyl wherein said aryl, heteroaryl and heterocycyl groups are optionally substituted with one or two substituents independently selected from the group consisting of C₁-6 alkyl, halo, hydroxyalkyl, hydroxy, alkoxy or keto; or

20 R¹ and R² can be taken together with the carbon atom to which they are attached to form a C₃-8 cycloalkyl or heterocycyl ring wherein said ring system is optionally substituted with one or two substituents independently selected from the group consisting of C₁-6 alkyl, hydroxyalkyl, haloalkyl and halo;

25 each R³ is independently selected from the group consisting of hydrogen, halo and C₁-2 alkyl wherein said alkyl group is optionally substituted with halo; or

30 two R³ groups can be taken together with the carbon atom to which they are attached to form a C₃-4 cycloalkyl ring, wherein said group is optionally substituted with halo;

D is C₁₋₃ alkyl, C₂₋₃ alkenyl, C₂₋₃ alkynyl, aryl, heteroaryl, C₃₋₈ cycloalkyl or heterocycyl wherein each said aryl, heteroaryl, cycloalkyl and heterocycyl groups, which may be monocyclic or bicyclic, is optionally substituted on either the carbon or the heteroatom with one to five substituents independently selected from the group consisting of C₁₋₆ alkyl, haloalkyl, halo, keto, alkoxy, -SR⁶, -SR⁷, -OR⁶, -OR⁷,

5 N(R⁷)₂, -SO₂R⁶ and -SO₂R⁸;

E is C₂₋₃ alkenyl, C₂₋₃ alkynyl, aryl, heteroaryl, C₃₋₈ cycloalkyl or heterocycyl wherein each said aryl, heteroaryl, cycloalkyl and heterocycyl groups, which may be monocyclic or bicyclic, is optionally substituted on either the carbon or the heteroatom with one to five substituents independently selected 10 from the group consisting of C₁₋₆ alkyl, haloalkyl, halo, keto, alkoxy, -SR⁶, -SR⁷, -OR⁶, -OR⁷, N(R⁷)₂, -SO₂R⁶ and -SO₂R⁸;

R⁵ is hydrogen, C₁₋₆ alkyl, C₂₋₆ alkenyl, C₂₋₆ alkynyl, C₁₋₆ alkyloxy, halo, nitro, cyano, aryl, heteroaryl, C₃₋₈ cycloalkyl, heterocycl, -C(O)OR⁸, -C(O)OSi[CH(CH₃)₂]₃, -OR⁶, -OR⁸, -C(O)R⁸, -

15 R⁸C(O)R⁶, -C(O)R⁶, -C(O)N(R^a)(R^b), -C(O)N(R⁷)(R⁷), -C(O)N(R⁸)(R⁹), -C(R⁸)(R⁹)OH, -SO_mR⁷, -SO_mR⁶, -R⁸SR⁶, -R⁶, -C(R⁶)₃, -C(R⁸)(R⁹)N(R⁶)₂, -NR⁸C(O)NR⁸S(O)₂R⁶, -SO_mN(R^c)(R^d), -SO_mCH(R⁸)(R⁹), -SO_m(C₁₋₆alkyl)C(O)(C₀₋₆alkyl)NR¹⁰, -SO_m(C₁₋₆alkyl)N(R¹⁰)₂, -SO_m(C₁₋₆alkyl)R¹⁰; -SO_m(C₃₋₈cycloalkyl)R¹⁰; -SO₂N(R⁸)C(O)(R⁷), -SO₂(R⁸)C(O)N(R⁷)₂, -OSO₂R⁸, -N(R⁸)(R⁹), -N(R⁸)C(O)N(R⁸)(R⁶), -N(R⁸)C(O)R⁶, -N(R⁸)C(O)R⁸, -N(R⁸)C(O)OR⁸, -N(R⁸)SO₂(R⁸), -C(R⁸)(R⁹)NR⁸C(R⁸)(R⁹)R⁶, -C(R⁸)(R⁹)N(R⁸)R⁶, -C(R⁸)(R⁹)N(R⁸)(R⁹), -C(R⁸)(R⁹)SC(R⁸)(R⁹)(R⁶), R⁸S-, -C(R^a)(R^b)N^aC(R^a)(R^b)(R⁶), -C(R^a)(R^b)N(R^a)(R^b), -C(R^a)(R^b)C(R^a)(R^b)N(R^a)(R^b), -C(O)C(R^a)(R^b)N(R^a)(R^b), -C(R^a)(R^b)N(R^a)C(O)R⁶, -C(O)C(R^a)(R^b)S(R^a), C(R^a)(R^b)C(O)N(R^a)(R^b), -B(OH)₂, -OCH₂O- or 4,4,5,5-tetramethyl-1,3,2-dioxaborolan-2-yl; wherein said groups are optionally substituted on either the carbon or the heteroatom with one to five substituents independently selected from the group consisting of C₁₋₆ alkyl, halo, keto, cyano, haloalkyl, hydroxyalkyl, -OR⁶, -OR⁷, -NO₂, -NH₂, -NHS(O)R⁸, -R⁶SO₂R⁷, -SO₂R⁷, -SO(R⁷), -SR⁷, -SR⁶, -SO_mN(R^c)(R^d), -SO_mN(R⁸)C(O)(R⁷), -C(R⁸)(R⁹)N(R⁸)(R⁹), -C(R⁸)(R⁹)OH, -COOH, -C(O)(O)(R⁷), -C(O)(O)C(R⁷)₃, -C(R^a)(R^b)C(O)N(R^a)(R^b), -C(O)(R^a), -N(R⁸)C(R⁸)(R⁹)(R⁶), -N(R⁸)CO(R⁶), -NH(CH₂)₂OH, -NHC(O)OR⁸, -Si(CH₃)₃, heterocycl, aryl, heteroaryl, (C₁₋₄alkyl)heteroaryl and (C₁₋₄alkyl)aryl;

R⁶ is hydrogen, aryl, aryl(C₁₋₄alkyl), (C₁₋₄alkyl)aryl, heteroaryl, heteroaryl(C₁₋₄alkyl), (C₁₋₄alkyl)heteroaryl, C₃₋₈ cycloalkyl, C₃₋₈ cycloalkyl(C₁₋₄alkyl), or heterocycl(C₁₋₄alkyl) wherein said

groups can be optionally substituted with one, two, or three substituents independently selected from the group consisting of halo, alkoxy and $\text{-SO}_2\text{R}^7$;

R^7 is hydrogen or C₁₋₆ alkyl which is optionally substituted with one, two, or three substituents

5 independently selected from the group consisting of halo, alkoxy, cyano, $\text{-N}(\text{R}^8)(\text{R}^9)$ and -SR^8 ;

R^8 is hydrogen or C₁₋₆ alkyl

R^9 is hydrogen or C₁₋₆ alkyl;

10 R^{10} is hydrogen, C₁₋₆ alkyl, cyano, aryl, heteroaryl, heterocycll, SO_m heteroaryl, $(\text{C}=\text{N})\text{O}(\text{C}_{1-6}\text{alkyl})$ or $(\text{C}_{1-6}\text{alkyl})\text{NH}(\text{SO}_m)$ heteroaryl;

15 R^a is hydrogen, C₁₋₆ alkyl, $(\text{C}_{1-6}\text{alkyl})\text{aryl}$, $(\text{C}_{1-6}\text{alkyl})\text{hydroxyl}$, $\text{-O}(\text{C}_{1-6}\text{alkyl})$, hydroxyl, halo, aryl, heteroaryl, C₃₋₈ cycloalkyl or heterocycll, wherein said alkyl, aryl, heteroaryl, C₃₋₈ cycloalkyl and heterocycl can be optionally substituted on either the carbon or the heteroatom with one, two, or three substituents independently selected from C₁₋₆ alkyl or halo;

20 R^b is hydrogen, C₁₋₆ alkyl, $(\text{C}_{1-6}\text{alkyl})\text{aryl}$, $(\text{C}_{1-6}\text{alkyl})\text{hydroxyl}$, alkoxy, hydroxyl, halo, aryl, heteroaryl, C₃₋₈ cycloalkyl or heterocycl, wherein said alkyl, aryl, heteroaryl, C₃₋₈ cycloalkyl and heterocycl can be optionally substituted on either the carbon or the heteroatom with one, two, or three substituents independently selected from group consisting of C₁₋₆ alkyl and halo; or
25 R^a and R^b can be taken together with the carbon atom to which they are attached or are between them to form a C₃₋₈ cycloalkyl ring or C₃₋₈ heterocycl ring wherein said 3-8 membered ring system may be optionally substituted with one or two substituents independently selected from C₁₋₆ alkyl and halo;

R^c is hydrogen or C₁₋₆ alkyl which is optionally substituted with one, two, or three substituents independently selected from the group consisting of halo and -OR^6 ;

30 R^d is hydrogen or C₁₋₆ alkyl which is optionally substituted with one, two, or three substituents independently selected from the group consisting of halo and -OR^6 ; or

R^c and R^d can be taken together with the nitrogen atom to which they are attached or are between them to form a C₃₋₈ heterocycl ring which is optionally substituted with one or two substituents

independently selected from the group consisting of C₁-6 alkyl, halo hydroxyalkyl, hydroxy, alkoxy and keto;

n is an integer from one to three;

5

m is an integer from zero to two;

p is an integer from one to three;

10 or a pharmaceutically acceptable salts, stereoisomers or N-oxide derivatives thereof.

2. The compound of Claim 1 wherein n is two.

15 3. The compound of Claim 2 wherein D is aryl or heteroaryl and E is aryl or
heteroaryl..

4. The compound of Claim 2 wherein each R³ is independently selected from
hydrogen or halo.

20 5. The compound of Claim 3 wherein R⁵ is -SO_mR⁷, -SO_mR⁶, -R⁸SR⁶,
SO_mN(R^c)(R^d), -SO_mCH(R⁸)(R⁹), -SO_m(C₁-6alkyl)C(O)(C₀-6alkyl)NR¹⁰, -SO_m(C₁-
6alkyl)N(R¹⁰)₂, -SO_m(C₁-6alkyl)R¹⁰; -SO_m(C₃-8cycloalkyl)R¹⁰; -SO₂N(R⁸)C(O)(R⁷) or -
SO₂(R⁸)C(O)N(R⁷)₂; wherein said groups are optionally substituted on either the carbon or the
heteroatom with one to five substituents independently selected from the group consisting of C₁-6 alkyl,
halo, keto, cyano, haloalkyl, hydroxyalkyl, -OR⁶, -OR⁷, -NO₂, -NH₂, -NHS(O)₂R⁸, -R⁶SO₂R⁷, -
SO₂R⁷, -SO(R⁷), -SR⁷, -SR⁶, -SO_mN(R^c)(R^d), -SO_mN(R⁸)C(O)(R⁷), -C(R⁸)(R⁹)N(R⁸)(R⁹), -
C(R⁸)(R⁹)OH, -COOH, -C(O)(O)(R⁷), -C(O)(O)C(R⁷)₃, -C(R^a)(R^b)C(O)N(R^a)(R^b), -C(O)(R^a), -
N(R⁸)C(R⁸)(R⁹)(R⁶), -N(R⁸)CO(R⁶), -NH(CH₂)₂OH, -NHC(O)OR⁸, -Si(CH₃)₃, heterocyclyl, aryl,
heteroaryl, (C₁-4alkyl)heteroaryl and (C₁-4alkyl)aryl.

30

6. The compound of Claim 5 wherein R¹ is hydrogen, R² is hydrogen, or R¹ and
R² can be taken together with the carbon atom to which they are attached to form a C₃-8 cycloalkyl ring
wherein said ring system is optionally substituted with one or two substituents independently selected
from C₁-6 alkyl, hydroxyalkyl, haloalkyl, or halo.

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7. The compound of Claim 1 selected from:

- 2-(2-bromophenyl)-N-(cyanomethyl)-5,5-difluorocyclohexanecarboxamide;
- 5 N-(cyanomethyl)-5,5-difluoro-2-[4'-(methylthio)-1,1'-biphenyl-2-yl] cyclohexanecarboxamide;
- N-(1-cyanocyclopropyl)-5,5-difluoro-2-[4'-(methylthio)-1,1'-biphenyl-2-yl] cyclohexanecarboxamide;
- 10 2-[4'-(benzyloxy)-1,1'-biphenyl-2-yl]-N-(cyanomethyl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-(4'-hydroxy-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-(4'-fluoro-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;
- 15 N-(cyanomethyl)-2-[4'-(methylsulfonyl)-1,1'-biphenyl-2-yl]cyclohexanecarboxamide;
- N-(cyanomethyl)-5,5-difluoro-2-(4'-fluoro-1,1'-biphenyl-2-yl) cyclohexanecarboxamide;
- N-(cyanomethyl)-2-(4'-vinyl-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;
- 20 N-(cyanomethyl)-2-(4'-cyclopropyl-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;
- N-(cyanomethyl)-5,5-difluoro-2-[5-(methylsulfonyl)-4'-(methylthio)-1,1'-biphenyl-2-yl]
cyclohexanecarboxamide;
- 25 N-(1-cyanocyclopropyl)-5,5-difluoro-2-[5-(methylsulfonyl)-4'-(methylthio)-1,1'-biphenyl-2-
yl]cyclohexanecarboxamide;
- N-(cyanomethyl)-2-{4'-(fluoromethyl)thio}-1,1'-biphenyl-2-yl) cyclohexanecarboxamide;
- 30 N-(cyanomethyl)-2-(2'-methyl-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-(4'-methyl-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;
- 35 N-(cyanomethyl)-2-(4'-ethyl-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;

- N-(cyanomethyl)-2-(4'-propyl-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-(3'-isopropyl-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;
- 5 N-(cyanomethyl)-2-(4'-isopropyl-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;
- 2-(4'-tert-butyl-1,1'-biphenyl-2-yl)-N-(cyanomethyl)cyclohexanecarboxamide;
- 10 N-(cyanomethyl)-2-[3'-(trifluoromethyl)-1,1'-biphenyl-2-yl]cyclohexanecarboxamide;
- N-(cyanomethyl)-2-(3'-fluoro-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-(2'-fluoro-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;
- 15 2-(4'-chloro-1,1'-biphenyl-2-yl)-N-(cyanomethyl)cyclohexanecarboxamide;
- 2-(3'-chloro-1,1'-biphenyl-2-yl)-N-(cyanomethyl)cyclohexanecarboxamide;
- 20 N-(cyanomethyl)-2-[3'-(hydroxymethyl)-1,1'-biphenyl-2-yl]cyclohexanecarboxamide;
- 2'-{2-[(cyanomethyl)amino]carbonyl}cyclohexyl)-1,1'-biphenyl-3-carboxylic acid;
- 2'-{2-[(cyanomethyl)amino]carbonyl}cyclohexyl)-1,1'-biphenyl-4-carboxylic acid;
- 25 N-(cyanomethyl)-2-(3'-methoxy-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-(2'-ethoxy-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;
- 30 N-(cyanomethyl)-2-(4'-ethoxy-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-(3'-isopropoxy-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-(4'-isopropoxy-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;

- N-(cyanomethyl)-2-(4'-phenoxy-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-[4'-(trifluoromethoxy)-1,1'-biphenyl-2-yl] cyclohexanecarboxamide;
- 5 N-(cyanomethyl)-2-[2'-(methylthio)-1,1'-biphenyl-2-yl]cyclohexanecarboxamide;
- N-(cyanomethyl)-2-[3'-(methylthio)-1,1'-biphenyl-2-yl]cyclohexanecarboxamide;
- N-(cyanomethyl)-2-[4'-(ethylthio)-1,1'-biphenyl-2-yl]cyclohexanecarboxamide;
- 10 2-(3'-amino-1,1'-biphenyl-2-yl)-N-(cyanomethyl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-[4'-(dimethylamino)-1,1'-biphenyl-2-yl]cyclohexanecarboxamide;
- 15 N-(cyanomethyl)-2-(3'-nitro-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;
- 2-[3'-(acetylamino)-1,1'-biphenyl-2-yl]-N-(cyanomethyl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-(4'-isobutyl-1,1'-biphenyl-2-yl)cyclohexanecarboxamide;
- 20 N-(cyanomethyl)-2-(2-pyridin-4-ylphenyl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-(2-quinolin-8-ylphenyl)cyclohexanecarboxamide;
- 25 N-(cyanomethyl)-2-[2-(2-methoxypyrimidin-5-yl)phenyl]cyclohexanecarboxamide;
- N-(cyanomethyl)-2-(2-pyridin-3-ylphenyl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-(2-thien-3-ylphenyl)cyclohexanecarboxamide;
- 30 2-(4'-acetyl-1,1'-biphenyl-2-yl)-N-(cyanomethyl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-(1,1':2',1"-terphenyl-2-yl)cyclohexanecarboxamide;
- 35 2-(4'-cyano-1,1'-biphenyl-2-yl)-N-(cyanomethyl)cyclohexanecarboxamide;

- 2-(3'-cyano-1,1'-biphenyl-2-yl)-N-(cyanomethyl)cyclohexanecarboxamide;
- 6-(3-bromophenyl)-N-(cyanomethyl)cyclohex-3-ene-1-carboxamide;
- 5 2-(3-bromophenyl)-N-(cyanomethyl)cyclohexanecarboxamide;
- tert-butyl 4-[3'-(2-[(cyanomethyl)amino]carbonyl)cyclohexyl]-1,1'-biphenyl-4-yl] piperazine-1-carboxylate;
- 10 N-(cyanomethyl)-2-(4'-piperazin-1-yl-1,1'-biphenyl-3-yl)cyclohexanecarboxamide;
- 2-(3-bromophenyl)-N-(cyanomethyl)-4-methylcyclopentanecarboxamide;
- 15 N-(cyanomethyl)-2-(4'-methoxy-1,1'-biphenyl-3-yl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-[4'-(methylthio)-1,1'-biphenyl-3-yl]cyclohexanecarboxamide;
- N-(cyanomethyl)-2-[4'-(methylsulfonyl)-1,1'-biphenyl-3-yl]cyclohexanecarboxamide;
- 20 N-(cyanomethyl)-2-(5-phenyl-1,3-oxazol-2-yl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-(5-phenyl-1,3-thiazol-2-yl)cyclohexanecarboxamide;
- 25 N-(cyanomethyl)-2-(5-phenyl-1,3-thiazol-2-yl)cyclohexanecarboxamide;
- 2-(2-bromophenyl)-N-(cyanomethyl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-[4'-(methylthio)-1,1'-biphenyl-2-yl]cyclohexanecarboxamide;
- 30 N-(cyanomethyl)-2-phenylcyclohexanecarboxamide;
- N-(cyanomethyl)-5,5-dichloro-2-[4'-(methylthio)-1,1'-biphenyl-2-yl] cyclohexanecarboxamide;

- N-(cyanomethyl)-5,5-difluoro-2-{1-methyl-3-[4-(methylthio)phenyl]-1H-pyrazol-4-yl}cyclohexanecarboxamide;
- 6-(2-bromophenyl)-N-(cyanomethyl)spiro[2.5]octane-5-carboxamide;
- 5
2-(3-bromo-1-methyl-1H-pyrazol-4-yl)-N-(cyanomethyl)-5,5-difluorocyclohexanecarboxamide;
- N-(cyanomethyl)-6-[4'-(methylthio)-1,1'-biphenyl-2-yl]spiro[2.5]octane-5-carboxamide;
- 10 2-(2-bromophenyl)-5,5-dichloro-N-(cyanomethyl)cyclohexanecarboxamide;
- 2-(3-bromo-1-methyl-1H-pyrazol-4-yl)-5,5-dichloro-N-(cyanomethyl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-((Z)-2-[4-(methylthio)phenyl]ethenyl)cyclohexanecarboxamide;
- 15 N-(cyanomethyl)-2-{2-[4-(methylthio)phenyl]ethyl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-((Z)-2-[4-(methylsulfonyl)phenyl]ethenyl)cyclohexanecarboxamide;
- 20 N-(cyanomethyl)-2-{2-[4-(methylsulfonyl)phenyl]ethyl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-((Z)-2-{4-[(trifluoromethyl)thio]phenyl}ethenyl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-((E)-2-[4-(methylsulfonyl)phenyl]ethenyl)cyclohexanecarboxamide;
- 25 N-(cyanomethyl)-2-(2-{4-[(trifluoromethyl)thio]phenyl}ethyl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-ethynylcyclohexanecarboxamide;
- 30 N-(cyanomethyl)-2-{{4-(methylthio)phenyl}ethynyl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-{{4-(methylsulfonyl)phenyl}ethynyl)cyclohexanecarboxamide;
- N-(cyanomethyl)-2-{{4-[(trifluoromethyl)thio]phenyl}ethynyl)cyclohexanecarboxamide;
- 35

N-(cyanométhyl)-2-(phenylethynyl)cyclohexanecarboxamide;

2-[(4-bromophenyl)ethynyl]-N-(cyanomethyl)cyclohexanecarboxamide;

5 2-(1,1'-biphenyl-4-ylethynyl)-N-(cyanomethyl)cyclohexanecarboxamide;

N-(cyanomethyl)-2-{{4'-(methylthio)-1,1'-biphenyl-4-yl}ethynyl} cyclohexanecarboxamide;

N-(cyanomethyl)-2-[(3-fluorophenyl)ethynyl]cyclohexanecarboxamide;

10 2-[(3-chlorophenyl)ethynyl]-N-(cyanomethyl)cyclohexanecarboxamide;

N-(cyanomethyl)-2-[(4-pyridin-4-ylphenyl)ethynyl]cyclohexanecarboxamide;

15 2-[(3-bromophenyl)ethynyl]-N-(cyanomethyl)cyclohexanecarboxamide;

2-(1,1'-biphenyl-3-ylethynyl)-N-(cyanomethyl)cyclohexanecarboxamide;

2-[(2-bromophenyl)ethynyl]-N-(cyanomethyl)cyclohexanecarboxamide;

20 2-[(1,1'-biphenyl-2-ylethynyl)-N-(cyanomethyl)cyclohexanecarboxamide;

N-(cyanomethyl)-2-{{4-(6-methoxypyridin-2-yl)thien-3-yl}ethynyl} cyclohexanecarboxamide;

25 N-(cyanomethyl)-2-{{4'-[(cyanomethyl)thio]biphenyl-2-yl}-5,5-difluorocyclohexanecarboxamide;

2-{{4'-[(2-amino-2-oxoethyl)thio]biphenyl-2-yl}-N-(cyanomethyl)-5,5-difluorocyclohexanecarboxamide;

30 N-(cyanomethyl)-2-{{4'-{2-[(cyanomethyl)amino]-2-oxoethyl}thio}biphenyl-2-yl}-5,5-difluorocyclohexanecarboxamide;

N-(cyanomethyl)-5,5-difluoro-2-{{4'-[(2-pyridin-2-ylethyl)thio]biphenyl-2-yl}cyclohexanecarboxamide;

N-(cyanomethyl)-5,5-difluoro-2-{{4'-[(pyridin-2-ylmethyl)thio]biphenyl-2-yl}cyclohexanecarboxamide;

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N-(cyanomethyl)-5,5-difluoro-2-{4'-(pyridin-3-ylmethyl)thio]biphenyl-2-yl}cyclohexanecarboxamide;

N-(cyanomethyl)-5,5-difluoro-2-{4'-(pyridin-4-ylmethyl)thio]biphenyl-2-yl}cyclohexanecarboxamide;

5 2-{4'-(1H-benzimidazol-2-ylmethyl)thio]biphenyl-2-yl}-N-(cyanomethyl)-5,5-difluorocyclohexanecarboxamide;

2-{4'-(1H-benzimidazol-6-ylmethyl)thio]biphenyl-2-yl}-N-(cyanomethyl)-5,5-difluorocyclohexanecarboxamide;

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N-(cyanomethyl)-5,5-difluoro-2-{4'-(1H-imidazol-4-ylmethyl)thio]biphenyl-2-yl}cyclohexanecarboxamide;

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N-(cyanomethyl)-5,5-difluoro-2-{4'-(1H-imidazol-2-ylmethyl)thio]biphenyl-2-yl}cyclohexanecarboxamide;

N-(cyanomethyl)-5,5-difluoro-2-[4'-({[1-(1H-imidazol-2-ylmethyl)-1H-imidazol-2-yl]methyl}thio]biphenyl-2-yl]cyclohexanecarboxamide;

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N-(cyanomethyl)-5,5-difluoro-2-(4'-{[2-(1H-imidazol-4-yl)ethyl]thio}biphenyl-2-yl)cyclohexanecarboxamide;

N-(cyanomethyl)-5,5-difluoro-2-(4'-{[2-(1H-imidazol-2-yl)ethyl]thio}biphenyl-2-yl)cyclohexanecarboxamide;

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N-(cyanomethyl)-5,5-difluoro-2-(4'-{[(1-methylpiperidin-4-yl)methyl]thio}biphenyl-2-yl)cyclohexanecarboxamide;

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N-(cyanomethyl)-5,5-difluoro-2-(4'-{[2-(1-methylpiperidin-4-yl)ethyl]thio}biphenyl-2-yl)cyclohexanecarboxamide;

N-(cyanomethyl)-5,5-difluoro-2-[2'-fluoro-4'-(methylthio)biphenyl-2-yl]cyclohexanecarboxamide;

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N-(cyanomethyl)-5,5-difluoro-2-(4'-{[(5-phenyl-1H-imidazol-2-yl)methyl]thio}biphenyl-2-yl)cyclohexanecarboxamide;

N-(cyanomethyl)-5,5-difluoro-2-{4'-(2-pyridin-4-ylethyl)thio)biphenyl-2-yl}cyclohexanecarboxamide;

N-(cyanomethyl)-5,5-difluoro-2-[4'-({2'-(pyridin-2-ylsulfonyl)amino}ethyl)thio)biphenyl-2-

5 yl]cyclohexanecarboxamide;

N-(cyanomethyl)-5,5-difluoro-2-(4'-{[2'-(pyridin-2-ylsulfonyl){2'-(pyridin-2-
ylsulfonyl)amino}ethyl]amino}ethyl)thio)biphenyl-2-yl)cyclohexanecarboxamide;

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N-(cyanomethyl)-5,5-difluoro-2-{4'-(1H-tetrazol-5-ylmethyl)thio)biphenyl-2-
yl}cyclohexanecarboxamide;

2-{4'-(1-cyanocyclopropyl)thio)biphenyl-2-yl}-N-(cyanomethyl)-5,5-difluorocyclohexanecarboxamide;

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methyl 1-{[2'-(2-{[(cyanomethyl)amino]carbonyl}-4,4-difluorocyclohexyl)biphenyl-4-
yl]thio}cyclopropanecarboximidoate;

2-{4'-(2-(1H-benzimidazol-2-yl)ethyl)thio)biphenyl-2-yl}-N-(cyanomethyl)-5,5-

20 difluorocyclohexanecarboxamide;

2-{4'-(1H-benzimidazol-7-ylmethyl)thio)biphenyl-2-yl}-N-(cyanomethyl)-5,5-
difluorocyclohexanecarboxamide;

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N-(cyanomethyl)-5,5-difluoro-2-[4'-{2'-(methylsulfonyl)amino}ethyl]thio)biphenyl-2-
yl]cyclohexanecarboxamide;

N-(cyanomethyl)-5,5-difluoro-2-(4'-{2'-(methylsulfonyl)amino}ethyl)biphenyl-2-
yl)cyclohexanecarboxamide;

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or a pharmaceutically acceptable salt or stereoisomer thereof.

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8. A pharmaceutical composition comprising a compound, pharmaceutically acceptable salt, stereoisomer or N-oxide derivative according to any one of Claims 1 to 7, and a pharmaceutically acceptable carrier.

5 9. The use of a compound, pharmaceutically acceptable salt, stereoisomer or N-oxide derivative according to any one of Claims 1 to 7, in the preparation of a medicament useful for the treatment of: osteoporosis, glucocorticoid induced osteoporosis, Paget's disease, abnormally increased bone turnover, periodontal disease, tooth loss, bone fractures, rheumatoid arthritis,
10 osteoarthritis, periprosthetic osteolysis, osteogenesis imperfecta, atherosclerosis, obesity, chronic obstructive pulmonary disease, metastatic bone disease, hypercalcemia of malignancy or multiple myeloma in a mammal in need thereof a therapeutically effective amount of a compound according to Claim 1.

15 10. A pharmaceutical composition comprising a compound, pharmaceutically acceptable salt, stereoisomer or N-oxide derivative according to any one of Claims 1 to 7, and another agent selected from the group consisting of: an organic bisphosphonate, an estrogen receptor modulator, an estrogen receptor beta modulator, an androgen receptor modulator, an inhibitor of
20 osteoclast proton ATPase, an inhibitor of HMG-CoA reductase, an integrin receptor antagonist, or an osteoblast anabolic agent, a Nonsteroidal anti-inflammatory drug, a selective cyclooxygenase-2 inhibitor, an inhibitor of interleukin-1 beta, a LOX/COX inhibitor and the pharmaceutically acceptable salts and mixtures thereof.

11. The use of a compound, pharmaceutically acceptable salt, stereoisomer or N-oxide derivative according to any one of Claims 1 to 7, and another agent selected from the group consisting of: an organic bisphosphonate, an estrogen receptor modulator, an androgen receptor modulator, an inhibitor of
5 osteoclast proton ATPase, an inhibitor of HMG-CoA reductase, an integrin receptor antagonist, an osteoblast anabolic agent, a Nonsteroidal anti-inflammatory drug, a selective cyclooxygenase-2 inhibitor, an inhibitor of interleukin-1 beta, a LOX/COX inhibitor and the pharmaceutically acceptable salts and mixtures thereof, in the preparation of a medicament useful for the
10 treatment of: osteoporosis, glucocorticoid induced osteoporosis, Paget's disease, abnormally increased bone turnover, periodontal disease, tooth loss, bone fractures, rheumatoid arthritis, osteoarthritis, periprosthetic osteolysis, osteogenesis imperfecta, atherosclerosis, obesity, chronic obstructive pulmonary disease, metastatic bone disease, hypercalcemia of malignancy or
15 multiple myeloma in a mammal in need thereof.